

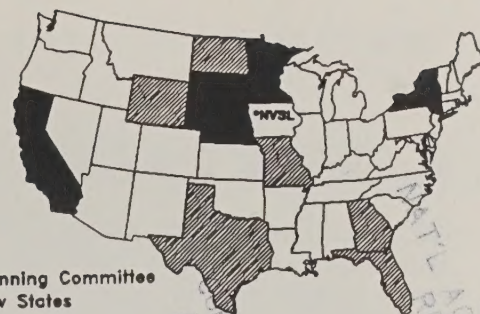
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DxMONITOR

Animal Health Reporting System

A cooperative effort of the American Association of Veterinary Laboratory Diagnosticians (AAVLD), the United States Animal Health Association (USAHA), and the United States Department of Agriculture: Animal and Plant Health Inspection Service (USDA:APHIS).



■ Planning Committee
▨ New States

Purpose: To report trends of confirmed disease diagnoses and animal health data collected from veterinary diagnostic laboratories and USDA:APHIS.

Symposium on Veterinary Diagnostic Laboratory Information Management Scheduled for August

A symposium on Veterinary Diagnostic Laboratory Information Management will be held at the Ramada Inn in Fort Collins, Colorado from August 10-14, 1991. The symposium, consisting of presentations, roundtable discussions, committee meetings, and workshops is ideally suited for diagnostic laboratory medical records/information managers, programmers, and others interested in the processing and management of veterinary diagnostic laboratory information. The sessions are designed to provide a forum for sharing ideas and methods for data management, automated information systems, inter-laboratory data communications, and planning future approaches to diagnostic laboratory information management.

Program

Specific subjects to be discussed during the program include:

- differences in operations between laboratories which affect data and data handling;
- manual, semi-automated, and automated data handling methods;
- gradual conversion to automated data handling versus going "cold turkey";

(continued on page 13)

What's happening at the labs?

Rabies Reported In a Minnesota Llama

The second case of llama rabies in the U.S. was diagnosed in Minnesota. This case adds llamas to the list of exotic pets that can pose a risk of rabies to humans (*see page 12*).

Minnesota VDL Conducts Cytogenetic Analyses on Domesticated Animals

Minnesota reports that cytogenetic abnormalities in cattle and pigs are usually manifested as hypoprolificacy and should be considered in the list of possible causes of subtle, diminished reproductive performance (*see page 12*).

BSE Slides Available from NVSL

NVSL announces the availability of reference histopathology slides of the microscopic lesions of Bovine Spongiform Encephalopathy (BSE) (*see page 12*).

NVSL Isolates Newcastle Disease Virus from Parrots

NVSL isolates Newcastle disease virus from domestic parrots originating from Houston, Texas (*see page 13*).

Cryptosporidiosis Identified In South Dakota Calves

The South Dakota Animal Disease Research and Diagnostic Laboratory reports that 11 of the 277 cryptosporidia positive cases (4%) in diarrheic calves had *Cryptosporidium* sp. as a solitary pathogen (*see page 13*).

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Data for this issue originated from the National Veterinary Services Laboratories (NVSL), diagnostic laboratories from California, Florida, Georgia, Minnesota, Missouri, New York, North Dakota, South Dakota, Wyoming, and APHIS.

The disease reporting period for new data is January 1 - March 31, 1991, except for paratuberculosis. Due to the time required to isolate the agent, paratuberculosis data are reported for October 1 - December 31, 1990.

Caution should be taken when extrapolating this information due to the limited sample size and inherent biases of submitted specimens.

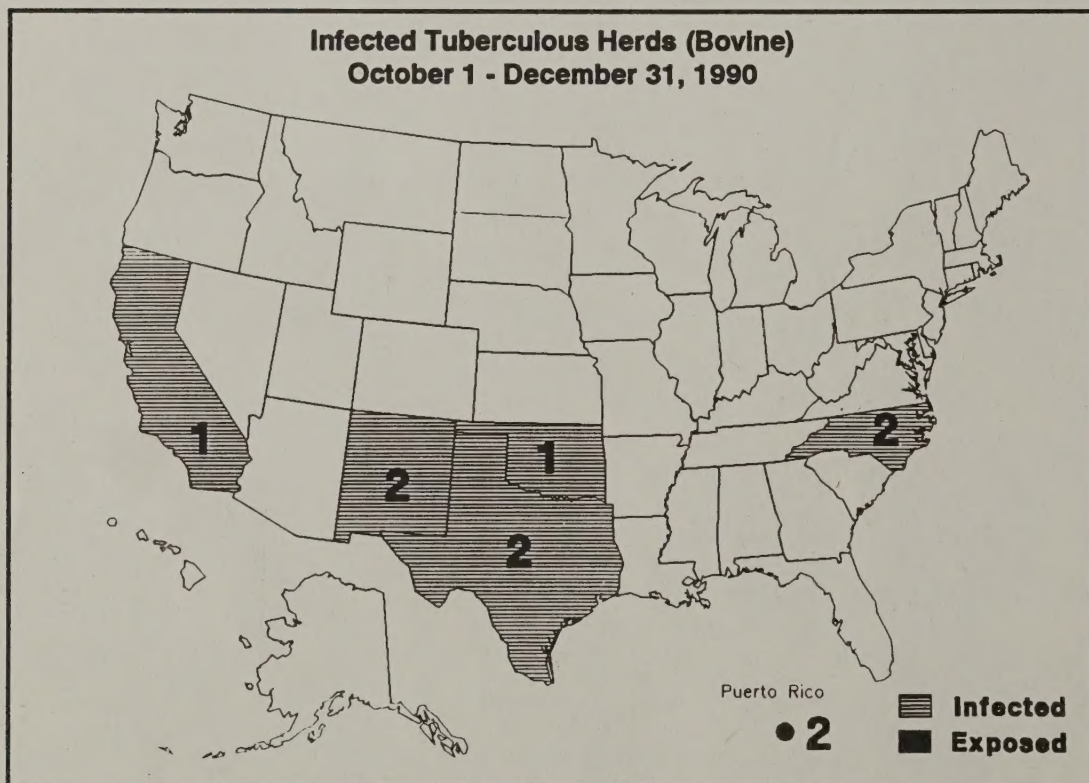
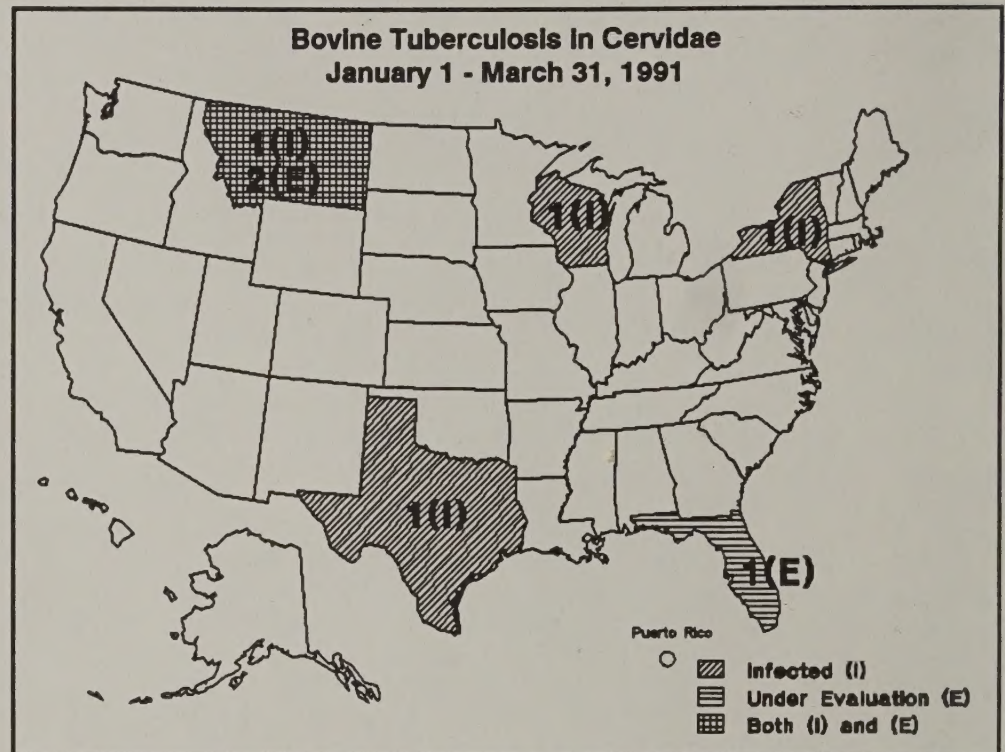
I. Patterns of Selected Diseases

Section I contains information on diseases of interest as defined by the Office International des Epizooties' (OIE) list. The purpose of reporting these data is to monitor patterns of confirmed cases of specific diseases on a State-by-State basis so that National distributions can be mapped and evaluated.

☐ Bovine Tuberculosis

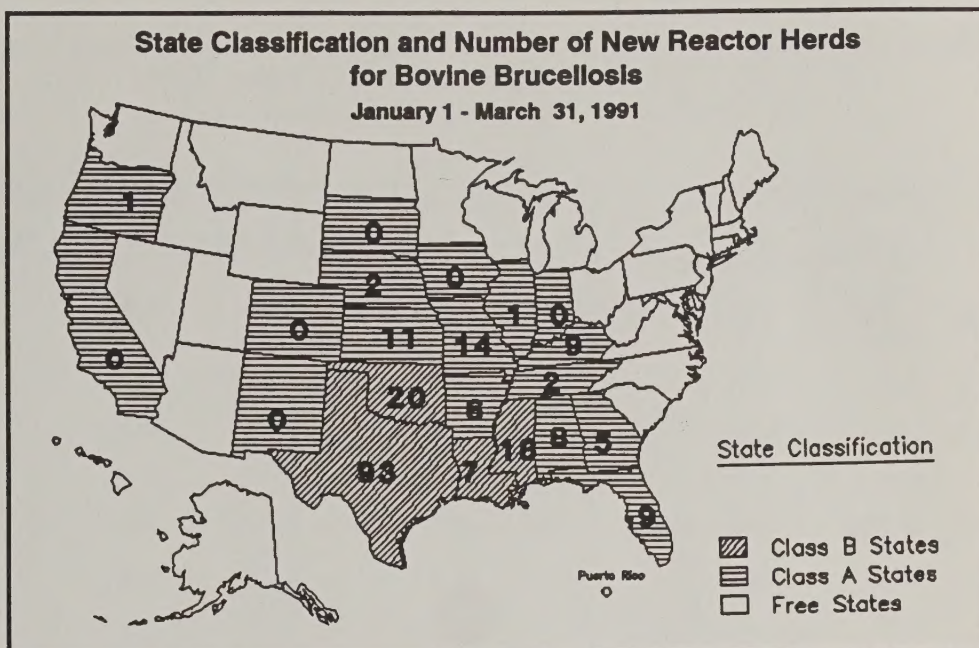
Source: Dr. Mitch Essey,
USDA:APHIS:VS,
Cattle Diseases Staff,
(301) 436-8715.

Infected Herd = Laboratory confirmed existence of *M. bovis*, either through agent isolation or positive histopathology.

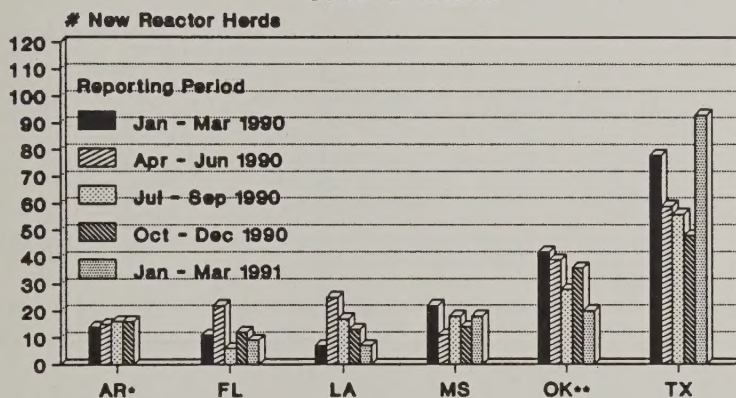


☐ **Bovine Brucellosis**

**Source: Dr. Mike Gilsdorf,
USDA:APHIS:VS,
Cattle Diseases Staff,
(301) 436-4918.**



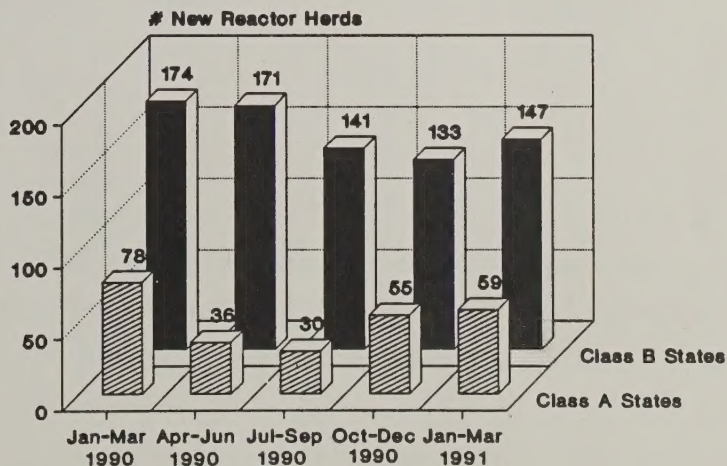
New Brucellosis Reactor Herds by Quarter, 1990 & 1991 Class B States



•Changed to Class A in October 1990

••Changed to Class A In April 1991

Total New Brucellosis Reactor Herds In Class A and B States by Quarter, 1990 & 1991



Reactor Herd = Newly identified herd with laboratory confirmed brucellosis case(s).

☐ Bovine Leukosis

Criteria for Positive Leukosis Test: AGID or pathology

	Apr. - Jun. 1990 Tests			Jul. - Sep. 1990 Tests			Oct. - Dec. 1990 Tests			Jan - Mar. 1991 Tests		
	Positive	Total	(%)	Positive	Total	(%)	Positive	Total	(%)	Positive	Total	(%)
CA	157	382	(41.1)	104	736	(14.1)	N/A			132	417	(31.7)
FL		N/A			N/A		24	114	(21.1)	115	525	(21.9)
GA		N/A			N/A		N/A			83	173	(48.0)
MN	262	582	(45.0)	77	358	(21.5)	42	281	(17.6)	71	287	(24.7)
MO		N/A			N/A		N/A			15	44	(34.1)
NE	17	56	(30.4)		N/A		N/A			N/A		
NY	1,191	6,519	(18.3)	461	2,149	(21.5)	191	944	(20.2)	572	3,987	(14.3)
ND		N/A		1	48	(2.1)	2	49	(4.1)	13	72	(18.1)
SD	11	96	(11.5)		N/A		16	157	(10.2)	6	90	(6.7)
TX		N/A			N/A		431	1,554	(27.7)	N/A		
WY		N/A			N/A		N/A			1	16	(6.3)
NVSL*	221	803	(27.5)	5	96	(5.2)	11	171	(6.4)	8	108	(7.4)

N/A = Data Not Available

Georgia, Missouri, and Wyoming report data from January through March 1991 only, as they recently joined the DxMONITOR project.

Tests for each State are done on submissions from that State only. The State of origin for Missouri specimens is unknown.

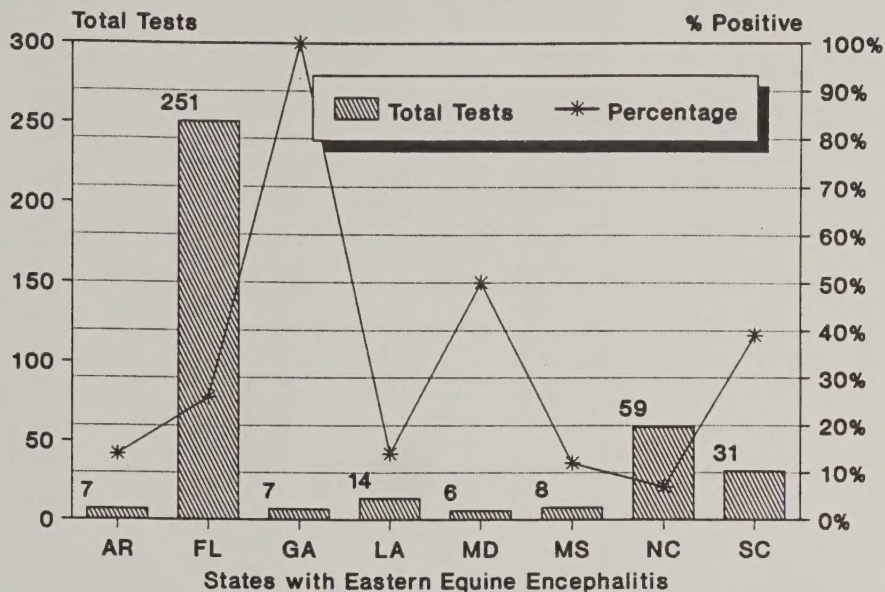
*Submissions to the National Veterinary Services Laboratories (NVSL) originate from many States.

Equine Encephalitis

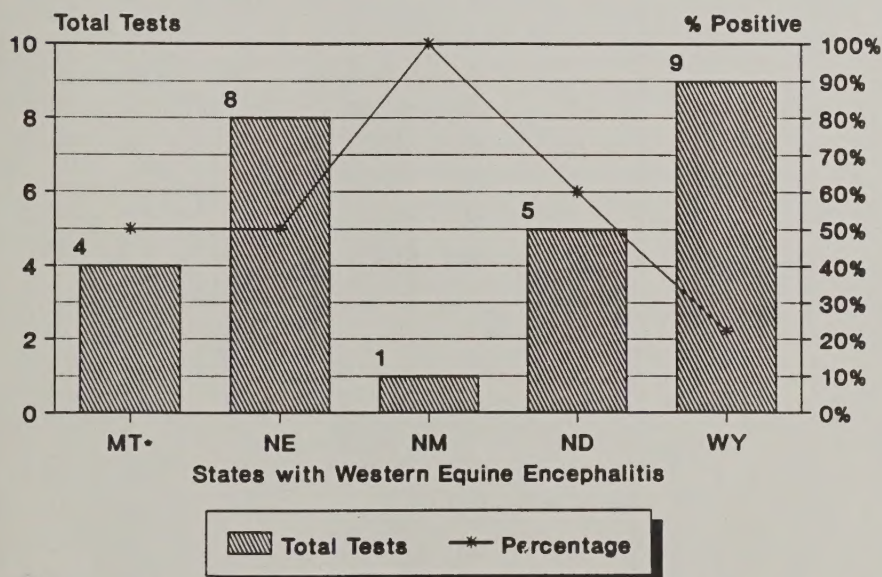
Sources: Dr. Jim Pearson,
NVSL, Diagnostic Virology
Laboratory, (515) 239-8551.

Dr. Harvey Rubin, Florida
Dr. John Cole, Georgia
Dr. Terry Schulze, New Jersey
Dr. John Tilstead, New Mexico
Dr. Keith Clark, Texas

Eastern Equine Encephalitis
Total Tests Reported and Percentage of Positive Tests
Submitted to NVSL and State Laboratories, 1990



Western Equine Encephalitis
Total Tests Reported and Percentage of Positive Tests
Submitted to NVSL and State Laboratories, 1990



*Corrected from Fall 1990 issue, where three positive cases were reported.

In 1990, NVSL tested 307 total submissions from 35 States. Florida, Georgia, New Jersey, New Mexico, and Texas did not submit specimens to NVSL in 1990. Florida had 65 clinical cases of EEE confirmed by the Centers for Disease Control (CDC) in 1990 at an estimated cost of \$3 million to the State's equine industry.¹ New Jersey and Texas had 6 and 4 EEE cases, respectively. One case of WEE was confirmed in Texas. The total number of submissions received for equine encephalitis testing in New Jersey and Texas in 1990 is unavailable.

¹ Morris, C. (ed.). 1991. Florida horse cases of EEE, 1990. In: Buzz Words, Florida Medical Entomology Laboratory, Vero Beach, Florida. February 1991, pg. 4.

☐ **Bluetongue**

Animals residing in areas endemic for the vector of bluetongue virus (BTV) are at significant risk for exposure to the antigens of BTV. This often results in seroconversion to the AGID test for BTV. In these areas, no demonstrative correlation has been found between AGID seropositivity and either isolation of the BTV agent or occurrence of clinical disease.

Criteria for Positive Bluetongue Test: AGID or isolation

	Apr. - Jun. 1990 Tests			Jul. - Sep. 1990 Tests			Oct. - Dec. 1990 Tests			Jan. - Mar. 1991 Tests		
	Positive	Total	(%)	Positive	Total	(%)	Positive	Total	(%)	Positive	Total	(%)
Bovine												
CA	39	108	(36.1)	33	157	(21.0)		N/A		81	202	(40.1)
FL		N/A			N/A		57	150	(38.0)	37	70	(52.9)
GA		N/A			N/A			N/A		49	85	(57.6)
MN	3	54	(5.6)	3	173	(1.7)	3	143	(2.1)	2	71	(2.8)
MO		N/A			N/A			N/A		16	87	(18.4)
NE	33	67	(49.3)		N/A			N/A			N/A	
NY	7	4,867	(0.1)	0	446	(0.0)	2	477	(0.4)	2	1,046	(0.2)
ND		N/A		7	85	(8.2)	0	343	(0.0)	1	192	(0.5)
SD	6	159	(3.8)		N/A		7	145	(4.8)	5	342	(1.5)
TX		N/A			N/A		301	1,110	(27.1)		N/A	
WY		N/A			N/A			N/A		7	193	(3.6)
NVSL*	49	677	(7.2)	41	420	(9.8)	66	389	(17.0)	24	133	(18.0)
Caprine												
CA	5	35	(14.2)	3	20	(15.0)		N/A		1	22	(4.5)
FL		N/A			N/A		0	0	(0.0)	0	0	(0.0)
GA		N/A			N/A			N/A		0	0	(0.0)
MN	5	43	(11.6)	13	272	(4.8)	0	79	(0.0)	0	1	(0.0)
MO		N/A			N/A			N/A		0	5	(0.0)
NE	0	0	(0.0)		N/A			N/A			N/A	
NY	0	34	(0.0)	0	8	(0.0)	1	14	(7.1)	0	3	(0.0)
ND		N/A		0	0	(0.0)	0	0	(0.0)	0	0	(0.0)
SD	0	46	(0.0)		N/A		0	7	(0.0)	0	2	(0.0)
TX		N/A			N/A		5	16	(31.3)		N/A	
WY		N/A			N/A			N/A		0	0	(0.0)
NVSL*	1	98	(1.0)	3	52	(5.8)	11	56	(19.6)	0	2	(0.0)
Ovine												
CA	10	39	(25.6)	18	78	(23.1)		N/A		5	52	(9.6)
FL		N/A			N/A			N/A		3	4	(75.0)
GA		N/A			N/A			N/A		2	6	(33.3)
MN	0	1	(0.0)	0	19	(0.0)	0	0	(0.0)	0	1	(0.0)
MO		N/A			N/A			N/A		1	21	(4.8)
NE	0	0	(0.0)		N/A			N/A			N/A	
NY	0	33	(0.0)	1	62	(1.6)	0	80	(0.0)	0	0	(0.0)
ND		N/A		0	6	(0.0)	0	0	(0.0)	0	0	(0.0)
SD		N/A			N/A			N/A		0	15	(0.0)
TX		N/A			N/A		18	74	(24.3)		N/A	
WY		N/A			N/A			N/A		0	6	(0.0)
NVSL*	27	163	(16.6)	16	131	(12.2)	5	121	(4.1)	2	88	(2.3)

N/A = Data Not Available

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☐ **Leptospirosis**
Criteria for Positive Leptospirosis Test: FA, isolation, or four-fold titer increase

	Apr. - Jun. 1990 Tests			Jul. - Sep. 1990 Tests			Oct. - Dec. 1990 Tests			Jan. - Mar. 1991 Tests		
	Positive	Total	(%)	Positive	Total	(%)	Positive	Total	(%)	Positive	Total	(%)
Bovine												
CA	4	58	(6.9)	6	140	(4.3)		N/A		6	143	(4.2)
FL		N/A			N/A		0	0	(0.0)	0	0	(0.0)
GA		N/A			N/A			N/A		215	1,632	(13.2)
MN	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)
MO		N/A			N/A			N/A		0	0	(0.0)
NE	6	16	(37.5)		N/A			N/A			N/A	
ND		N/A		0	0	(0.0)	0	0	(0.0)	0	238	(0.0)
SD	0	92	(0.0)		N/A		0	94	(0.0)	1	398	(0.3)
TX*		N/A			N/A		63	8,244	(0.8)		N/A	
WY		N/A			N/A			N/A		7	193	(3.6)
Equine												
CA	0	6	(0.0)	0	9	(0.0)		N/A		0	40	(0.0)
GA		N/A			N/A			N/A		12	42	(28.6)
MN	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)
NE	0	0	(0.0)		N/A			N/A			N/A	
ND		N/A		0	0	(0.0)	0	0	(0.0)	0	3	(0.0)
SD	0	3	(0.0)		N/A		0	0	(0.0)	0	3	(0.0)
TX*		N/A			N/A		2	116	(1.7)		N/A	
WY		N/A			N/A			N/A		0	0	(0.0)
Ovine												
CA	0	4	(0.0)	1	4	(25.0)		N/A		1	29	(3.4)
GA		N/A			N/A			N/A		0	0	(0.0)
MN	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)
NE	0	1	(0.0)		N/A			N/A			N/A	
ND		N/A		0	0	(0.0)	0	0	(0.0)	0	3	(0.0)
SD	0	0	(0.0)		N/A		0	4	(0.0)	0	7	(0.0)
TX*		N/A			N/A		0	189	(0.0)		N/A	
WY		N/A			N/A			N/A		0	0	(0.0)
Porcine												
CA	0	2	(0.0)	0	12	(0.0)		N/A		0	17	(0.0)
GA		N/A			N/A			N/A		37	276	(13.4)
NE	2	26	(7.7)		N/A			N/A			N/A	
ND		N/A		0	0	(0.0)	0	0	(0.0)	0	35	(0.0)
SD	5	37	(13.5)		N/A		0	246	(0.0)	1	173	(0.6)
TX*		N/A			N/A		3	413	(0.7)		N/A	
WY		N/A			N/A			N/A		0	0	(0.0)

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*AGGL Test

☐ Paratuberculosis

Criteria for Positive Paratuberculosis Test: Culture positive and/or histopathology

	Apr. - Jun. 1990 Tests			Jul. - Sep. 1990 Tests			Oct. - Dec. 1990 Tests		
	Positive	Total	(%)	Positive	Total	(%)	Positive	Total	(%)
Bovine									
CA	8	73	(10.9)	N/A			5	25	(20.0)
FL		N/A		4	13	(30.8)	14	24	(58.3)
MN	11	29	(37.9)	24	43	(55.8)	13	165	(7.9)
MO		N/A			N/A		1	unknown	
NY	190	3,730	(5.1)	221	2,992	(7.4)	212	5,310	(4.0)
ND		N/A		1	unknown		1	1	(100.0)
SD	0	1	(0.0)	4	7	(57.1)	6	8	(75.0)
TX		N/A		7	41	(17.1)		N/A	
WY		N/A			N/A		0	0	(0.0)
NVSL*	35	68	(51.5)	33	648	(5.1)	30	97	(30.9)
Caprine									
CA	0	4	(0.0)	N/A			0	0	(0.0)
FL		N/A		0	0	(0.0)	0	0	(0.0)
MN	0	0	(0.0)	1	1	(100.0)	0	0	(0.0)
NY	17	18	(94.4)	0	1	(0.0)	0	591	(0.0)
ND		N/A		0	0	(0.0)	0	0	(0.0)
SD	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)
TX		N/A		0	1	(0.0)		N/A	
WY		N/A			N/A		0	0	(0.0)
NVSL*	1	2	(50.0)	1	1	(100.0)	1	3	(33.3)
Ovine									
CA	0	0	(0.0)	N/A			0	0	(0.0)
FL		N/A		0	0	(0.0)	0	0	(0.0)
MN	0	0	(0.0)	0	0	(0.0)	1	1	(100.0)
NY	0	14	(0.0)	1	24	(4.2)	0	6	(0.0)
ND		N/A		0	0	(0.0)	0	0	(0.0)
SD	0	0	(0.0)	0	0	(0.0)	0	0	(0.0)
TX		N/A		0	1	(0.0)		N/A	
WY		N/A			N/A		0	0	(0.0)
NVSL*	0	0	(0.0)	0	5	(0.0)	0	0	(0.0)

N/A = Data Not Available

Missouri and Wyoming report data from October through December 1990 only, as they recently joined the DxMONITOR project. Tests for each State are done on submissions from that State only. The State of origin for Missouri specimens is unknown.

*Submissions to the National Veterinary Services Laboratories (NVSL) originate from many States.

II. Etiologic Agents Associated with Calf Diarrhea

Section II characterizes agents most commonly associated with calves (8 weeks of age or less) having clinical signs, or history of diarrhea, from accessions reported to veterinary diagnostic laboratories.

Criteria

- **Bovine Viral Diarrhea:** Isolation of BVD virus or FA detection of BVD antigen in any tissue and lesions of BVD.
- **Coccidia:** Parasitologic examination or histopathologic examination.

Apr. - Jun. 1990 Tests			Jul. - Sep. 1990 Tests			Oct. - Dec. 1990 Tests			Jan. - Mar. 1991 Tests		
Positive/Total			Positive/Total			Positive/Total			Positive/Total		
Dairy	Beef	Unknown	Dairy	Beef	Unknown	Dairy	Beef	Unknown	Dairy	Beef	Unknown

Bovine Viral Diarrhea

CA	1/37	0/16	3/17	0	0	0		N/A	0/34	0/24	1/7
FL		N/A			N/A		0	0	0	0	0
GA		N/A			N/A			N/A	N/A	N/A	226/287
MN	1/54	1/38	1/?		N/A		3/?	0/?	0/?	0/?	1/?
MO		N/A			N/A			N/A	N/A	N/A	7/?
NE	1/1	13/71	6/72		N/A			N/A		N/A	
NY	0/38	0/0	0/1	0	0	0	0	0	0	0	0
ND*		N/A		0/0	2/28	0/0	0/0	4/31	0/0	N/A	N/A
SD	5/19	10/40	8/34		N/A		21/75	4/10	7/21	18/85	11/43
WY		N/A			N/A			N/A		1/3	12/33

Coccidia

CA	3/?	?	1/?	3/?	0/?	1/?		N/A	0/79	1/22	0/9
FL		N/A			N/A		0	0	0	0	0
GA		N/A			N/A			N/A	N/A	N/A	0/3
MN	0/17	1/5	1/?		N/A		1/?	0/?	0/?	3/?	0/?
MO		N/A			N/A			N/A	N/A	N/A	0/?
NE	0/2	1/45	3/45		N/A			N/A		N/A	
NY	0/4	0/0	6/7	8/15	0/0	0/1	26/66	0/0	0/0	1/8	0/0
ND*		N/A		0/0	2/28	0/0	0/0	2/31	0/0	N/A	N/A
SD	0/10	1/41	2/39		N/A		3/31	0/0	1/8	1/35	0/7
WY		N/A			N/A			N/A		0/6	2/52

N/A = Data Not Available

? = Number of tests unknown

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Tests for each State are done on submissions from that State only. The State of origin for Missouri specimens is unknown.

*North Dakota tests done on calves from birth to one month of age.

Criteria

- **Coronavirus:** Coronavirus antigen by FA or ELISA, or coronavirus by electron microscopic examination of feces/intestinal contents.
- **Cryptosporidia:** Parasitologic examination or histopathologic examination.
- **E. coli:** Culture of *E. coli* from intestine and demonstration of at least one virulence characteristic such as presence of adhesive antigens (K99), microscopic evidence of bacterial adherence, or detection of enterotoxin.

	Apr. - Jun. 1990 Tests			Jul. - Sep. 1990 Tests			Oct. - Dec. 1990 Tests			Jan. - Mar. 1991 Tests		
	Positive/Total			Positive/Total			Positive/Total			Positive/Total		
	Dairy	Beef	Unknown	Dairy	Beef	Unknown	Dairy	Beef	Unknown	Dairy	Beef	Unknown
Coronavirus												
CA	4/22	0/1	4/22	10/48	1/7	6/35		N/A		23/87	10/20	1/8
FL		N/A			N/A		0/8	1/9	0/0	1/20	1/18	0/0
GA		N/A			N/A			N/A		N/A	N/A	4/4
MN	9/70	13/47	4/?		N/A		19/?	5/?	0/?	27/?	2/?	4/?
MO		N/A			N/A			N/A		N/A	N/A	15/?
NE	1/1	14/88	7/218		N/A			N/A			N/A	
NY	0/38	0/0	0/1	0/69	0/0	0/4	4/32	0/0	0/0	4/7	0/1	0/0
ND*		N/A		0/0	0/28	0/0	0/0	3/31	0/0	N/A	N/A	10/75
SD	8/35	17/115	23/146		N/A		6/74	1/3	2/14	21/96	5/45	9/64
WY		N/A			N/A			N/A		3/7	46/84	14/19
Cryptosporidia												
CA	39/61	1/6	25/61	49/130	2/7	7/30		N/A		54/136	3/22	5/15
FL		N/A			N/A		0	0	0	0	0	0
GA		N/A			N/A			N/A		N/A	N/A	0/1
MN	32/66	18/34	3/?		N/A		67/?	4/?	2/?	63/?	5/?	3/?
MO		N/A			N/A			N/A		N/A	N/A	4/?
NE	0/2	6/71	8/45		N/A			N/A			N/A	
NY	2/4	0/0	1/7	0	0	0	38/66	0/0	0/0	7/8	0/0	0/1
ND*		N/A		0/0	0/28	0/0	0/0	2/31	0/0	N/A	N/A	19/68
SD	7/32	22/110	37/143		N/A		15/52	0/3	1/13	21/91	9/40	8/51
WY		N/A			N/A			N/A		0/6	2/61	0/14
E. coli												
CA	15/32	1/2	3/6	21/83	2/6	8/26		N/A		18/69	0/18	2/8
FL		N/A			N/A		0	0	0	0	0	0
MN	3/63	3/46	1/?		N/A		8/?	0/?	0/?	10/?	0/?	1/?
MO		N/A			N/A			N/A		N/A		17/?
NE	0/1	11/68	23/125		N/A			N/A			N/A	
NY	7/9	0/0	1/50	34/74	0/0	3/7	123/224	0/0	0/0	63/87	2/3	8/9
ND*		N/A		1/?	7/28	0/0	0/0	11/31	0/0	N/A	N/A	30/75
SD	3/23	5/58	16/90		N/A		11/30	1/3	4/11	10/44	12/35	6/40
WY		N/A			N/A			N/A		2/7	14/84	1/19

N/A = Data Not Available

? = Number of tests unknown

Georgia, Missouri, and Wyoming report data from January through March 1991 only, as they recently joined the DxMONITOR project.

Tests for each State are done on submissions from that State only. The State of origin for Missouri specimens is unknown.

*North Dakota tests done on calves from birth to one month of age.

Criteria

- **Rotavirus:** Rotavirus antigen by FA or ELISA, or rotavirus by electron microscopic examination of feces/intestinal contents.
- **Salmonella:** Culture of Salmonella (serotype identification encouraged).

Apr. - Jun. 1990 Tests			Jul. - Sep. 1990 Tests			Oct. - Dec. 1990 Tests			Jan. - Mar. 1991 Tests		
Positive/Total			Positive/Total			Positive/Total			Positive/Total		
Dairy	Beef	Unknown	Dairy	Beef	Unknown	Dairy	Beef	Unknown	Dairy	Beef	Unknown

Rotavirus

CA	25/60	4/10	29/68	56/151	0/2	12/59		N/A	50/136	14/27	5/20
FL		N/A			N/A		1/8	0/9	2/20	4/18	0/0
GA		N/A			N/A			N/A	N/A	N/A	1/29
MN	22/71	9/47	12/?		N/A		39/?	4/?	43/?	1/?	4/?
MO		N/A			N/A			N/A	N/A	N/A	12/?
NE	0/2	63/159	57/219		N/A			N/A		N/A	
NY	0/38	0/0	0/1	0/69	0/0	0/4	2/30	0/0	1/7	1/1	0/0
ND*		N/A		0/0	0/28	0/0	0/0	1/31	N/A	N/A	4/75
SD	13/35	22/115	35/146		N/A		17/75	1/31	33/47	6/45	9/64
WY		N/A			N/A			N/A	2/7	12/84	3/19

Salmonella

CA	42/91	1/18	37/73	50/197	2/12	5/6		N/A	18/230	8/53	4/32
FL		N/A			N/A		0	0	0	0	0
MN	4/72	0/48	4/?		N/A		4/?	0/?	23/?	0/?	0/?
MO		N/A			N/A			N/A	N/A	N/A	2/?
NE	0/2	4/118	12/135		N/A			N/A		N/A	
NY	0/9	0/0	14/50	5/84	0/0	0/7	0	0	0/87	0/3	0/9
ND*		N/A		0/0	3/28	0/0	0/0	13/31	N/A	N/A	5/75
SD	2/36	5/115	2/146		N/A		22/91	0/10	10/103	1/50	4/63
WY		N/A			N/A			N/A	1/7	1/84	1/19

Salmonella Serotypes for January - March 1991

		dublin	typhimurium	typhimurium copenhagen	hadar	enteritidis	montivideo	thompson	9,12:nonmotile
California	Dairy	12	6						
	Beef	5	3						
	Unknown	4							
Minnesota	Dairy	1	8	7	2	1	1	1	2

N/A = Data Not Available

? = Number of tests unknown

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*North Dakota tests done on calves from birth to one month of age.

III. Lab Notes

Section III presents short descriptions of current investigations, outbreaks, or events of potential interest to diagnostic laboratories. The purpose is to provide a forum for timely exchanges of information about veterinary diagnostic laboratory activities. Submissions from nonparticipating laboratories are welcome.

Rabies Reported in a Minnesota Llama

The second case of llama rabies in the U.S. was diagnosed in Minnesota. A male llama weighing approximately 300 pounds died in February of 1991 in Wadena County, Minnesota. The animal showed signs of aggressive behavior before death. A clinical diagnosis of rabies was made by the attending veterinarian and samples of brain, liver, spleen, and lung were submitted to the Minnesota Veterinary Diagnostic Laboratory. The brain was found to be positive for rabies by the standard fluorescent antibody test. Many negri bodies were seen in the hippocampus of the brain; inflammation was minimal.

Rabies in llamas seems to be rare because we could find only three reported cases of rabies in llamas; two in South America and one in Oklahoma. This case adds llamas to the list of exotic pets such as raccoons, skunks, rabbits, and ferrets, that can pose a risk of rabies to humans. Contact: Sagar Goyal, (612) 625-8787.

Minnesota VDL Conducts Cytogenetic Analyses on Domesticated Animals

Cytogenetic abnormalities in cattle and pigs are usually manifested as hypoprolificacy and should be considered in the list of possible causes of subtle diminished reproductive performance. Some animals in virtually all the beef breeds of continental European origin have the 1/29 centric fusion (Robertsonian) translocation, known to reduce breeding efficiency by 7 to 10 percent. We have found this to be true in many Charolais cattle. A 14/20 centric fusion, unique to Simmental cattle, has been found recently in several States in the U.S. One Simbrah bull had both a 1/29 and 14/20 translocation. Pigs the world over have mainly reciprocal translocations, a type of defect that reduces litter size by up to 100 percent, though 30 to 40 percent is more common. All of these abnormalities are transmitted to half the offspring, regardless of gender, and can be spread through a herd quickly and insidiously through the use of untested carrier breeding stock. Most countries in the world have established surveillance programs to avoid such a development; the U.S. has not. We do a variety of cytogenetic analyses on domesticated animals. Contact: Dr. George Ruth, (612) 625-8787.

Bovine Spongiform Encephalopathy Histopathology Slides Available from NVSL

A letter announcing the availability of reference histopathology slides of the microscopic lesions of bovine spongiform encephalopathy (BSE) has been sent by the Pathobiology Laboratory of the National Veterinary Services Laboratories (NVSL) to all State veterinary laboratory directors and university departments of veterinary pathology, comparative and experimental pathology, and pathobiology. Upon receipt of a request for these slides on official letterhead from the respective facility, a set of slides will be promptly sent. This is a continuation of the surveillance program being conducted by the NVSL to detect the presence of any case of BSE extant in the continental United States. Contact: Dr. D. R. Cassidy, (515) 239-8521.

NVSL Isolates Newcastle Disease Virus from Parrots

The Diagnostic Virology Laboratory of NVSL has confirmed the presence of exotic Newcastle disease virus in parrots submitted from four States: Indiana, Illinois, Michigan, and Texas. The initial source of infected birds has been traced to a dealer in Houston, Texas who sold birds to a breeder in Indiana and a pet shop owner in Michigan. The outbreak was discovered when birds from the breeder in Indiana became sick after being sold to a customer in Illinois. Additional trace-backs of possible contacts and testing of birds on infected premises is continuing to determine if the infection has spread to other birds. Contact: Dr. J. E. Pearson, (515) 239-8551.

Interested laboratories are asked to get involved!

The DxMONITOR would like to expand the number of laboratories in its reporting system. For more information concerning participation, contact the staff at the address provided below.

Send all correspondence and address changes to:

USDA:APHIS:VS
DxMONITOR
555 South Howes, Suite 100
Fort Collins, CO 80521
(303) 490-7800
FTS 323-7800

Articles may be reprinted with
acknowledgement of source.

Cryptosporidiosis Identified in South Dakota Calves

The South Dakota Animal Disease Research and Diagnostic Laboratory in Brookings reviewed 860 cases of calf enteritis submitted in 1986-87. Specimen types reviewed from diarrheic calves included fecal samples, and tissue samples from live and dead animals.

Cryptosporidium sp. was identified in 277 of the cases (32.2%), which correlates closely with data reported from Minnesota¹. Cryptosporidium sp. was the only pathogen in 142 of the cryptosporidia positive cases (51.3%). For the remaining cases involving mixed infections with cryptosporidiosis, the most common co-pathogens were: rotavirus (32%); coronavirus (20%); *E. coli* (11%); rotavirus and coronavirus (7%); BVD (6%); salmonella (4%); and other (20%).

Other pathogens may not have been detected in cases where cryptosporidia was the only diagnosis, due to diagnostic pitfalls (e.g., specimen selection, postmortem autolysis, stage of disease). If the questionable cases are eliminated, then 11 of the 277 cryptosporidia positive cases (4%) had Cryptosporidium sp. as a solitary pathogen. Contact: Dr. David Zeman, (605) 688-5171.

¹ Collins, J.E. 1991. *Cryptosporidium* most common enteric pathogen in Minnesota calves. *DxMONITOR*, Spring 1991, pg. 13.

Symposium on VDLIM (continued from page 1)

- coding schemes for pathology results and other diagnostic data;
- computer hardware, operating systems, and applications packages, and descriptions and/or demonstrations of Veterinary Diagnostic Laboratory Information Management Systems currently used by several of the laboratories.

DxMONITOR Evaluation

A half day session on August 13 will be devoted to evaluating the DxMONITOR system. The original Planning Committee members and representatives from participating laboratories will discuss topics including the seasonality of disease reporting, test criteria, data retrieval and transfer, and program goals.

Committees

Working groups will be established to develop common data dictionaries for improved inter-laboratory communications. They will also discuss data transfer methodology, design a standardized test referral form, and plan future meetings and cooperative programs.

Special Workshops

A special workshop on coding schemes (e.g., SNOVET, SNVDO, free test) will be held on August 10. A second workshop on how to design a laboratory information management system will take place on August 11 and continue the next evening.

For more information contact:

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